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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/065,494

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Gary L. Sugar

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EXAMINER

DUONG, FRANK

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/065,494

Applicant(s)

SUGAR ET AL.

Examiner

Frank Duong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,8-13,17,19-24,28 and 30-35 is/are rejected.
- 7) ☒ Claim(s) 3-5,14-16,18,25-27 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is a response to communications dated 10/24/02. Claims 1-35 are pending in the application.

#### ***Information Disclosure Statement***

2. The information disclosure statements filed 11/29/02 and 12/17/02 comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. They have been considered and placed in the application file.

#### ***Claim Objections***

3. Claims 11 and 28 are objected to because of the following informalities:

As per claim 11, line 1, "capable of accessing" should be changed to --configured to access--.

As per claim 28, line 3, "a device" should be changed to --the device-- or --said device--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 6, 8-13, 17, 19-24, 28 and 30-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe et al (USP 6,285,662) (hereinafter "Watanabe").

Regarding **claim 1**, in accordance with Watanabe reference entirety, Watanabe shows in a wireless communication network (Fig. 1) having a plurality of devices (10) contending for access to the network (*col. 6, lines 40-49*), wherein the plurality of devices (12) include devices (12) that operate at different data rates when transmitting data on the network (*col. 1, line 9*), a method comprising assigning network access parameters (*values of feedback acknowledgements and/or time slots*) to one or more of the devices (12) so as to control throughput on the network (*col. 8, lines 5-24 and thereafter, Watanabe discloses access point 14 dynamically allocates a number of time slots to device 12 for transmitting data on a network in a controlled manner*).

Regarding **claims 2**, in addition to features recited in base claim 1 (see *rationales discussed above*), Watanabe further discloses wherein the step of assigning comprises assigning a *maximum data packet length* (time slots) used by a device (12) when transmitting data on the wireless network (*col. 8, lines 21-24, Watanabe discusses transmitter circuitry causes a packet of data sourced by the data source 34 to be inserted into a random access channel within a contention window selected by the selector*).

Regarding **claims 6**, in addition to features recited in base claim 1 (see *rationales discussed above*), Watanabe further discloses wherein the step of assigning

comprises assigning a contention window size (*time slots*) used by a device (12) when it accesses the network (*col. 8, lines 9-25*).

Regarding **claims 8**, in addition to features recited in base claim 1 (see *rationales discussed above*), Watanabe further discloses the step of detecting when a device goes on or off (*sleep mode*) the network, and in response thereto, modifying the network access parameters (*selection of the size of the contention window to be a multiple of frames*) of one or more devices (*col. 10, lines 22-45*).

Regarding **claims 9**, in addition to features recited in base claim 1 (see *rationales discussed above*), Watanabe further discloses determine when there is a change in the fastest data rate device in the network, and in response thereto, changing the data packet length or the contention window size used by one or more devices operating on the network (*col. 9, lines 26-32 and thereafter, Watanabe discloses the selection of the contention windows for device 12 (fastest data rate device) is also depended from the traffic conditions*).

Regarding **claims 10**, in addition to features recited in base claim 1 (see *rationales discussed above*), Watanabe further discloses monitoring average access time of devices on the network (*traffic conditions or collision condition*), and changing the data packet length or the contention window size used by one or more devices operating on the network in response to detecting a predetermined change in the average access time (*col. 9, lines 26-32 and thereafter, Watanabe discloses the selection of the contention windows for device 12 (fastest data rate device) is also depended from the traffic conditions or collision condition*).

*(Note: Claims 11, 12-13, 17, and 19-21 call for a system comprising elements mirrored the method steps of method claims 1-2, 6 and 8-10. Thus, they are rejected by the same rationales discussed above and as followings)*

Regarding **claim 11**, in accordance with Watanabe reference entirety, Watanabe shows a wireless communication system (Fig. 1) comprising a plurality of wireless communication devices (12) configured to access a wireless network (Fig. 1) using carrier sense multiple access procedures (*WLAN*) for transmission of data, the plurality of devices including devices (12) that operate at different data rates when transmitting data on the network, each device (12) accessing the network according to a network access control parameter (*values of feedback acknowledgements and/or time slots*) to permit access to the network in a controlled manner (*col. 8, lines 5-24 and thereafter, Watanabe discloses access point 14 dynamically allocates a number of time slots to device 12 for transmitting data on a network in a controlled manner*).

Regarding **claim 12**, in addition to features recited in base claim 11 (see *rationales discussed above*), Watanabe further discloses a base device (14) that transmits information to and receives information from any one or more of the wireless communication devices (12), wherein the base device assigns values for the network access parameter to one or more wireless communication devices so as to control throughput on the wireless network (*col. 8, lines 5-24*).

Regarding **claim 13**, in addition to features recited in base claim 12 (see *rationales discussed above*), Watanabe further discloses wherein the base device assigns a maximum data packet length (time slots) as the network access control

parameter to be used by a wireless communication device (12) when transmitting data on the wireless network (*col. 8, lines 21-24, Watanabe discusses transmitter circuitry causes a packet of data sourced by the data source 34 to be inserted into a random access channel within a contention window selected by the selector*).

Regarding **claim 17**, in addition to features recited in base claim 12 (see *rationales discussed above*), Watanabe further discloses wherein the base device (14) assigns a contention window size (time slots) as the network access control parameter to be used by a wireless communication device (12) when accessing the network (*col. 8, lines 5-24*).

Regarding **claim 19**, in addition to features recited in base claim 12 (see *rationales discussed above*), Watanabe further discloses wherein the base device detects when a device goes on or off (*sleep mode*) the network, and in response thereto, modifies the network access parameters of one or more devices (*selection of the size of the contention window to be a multiple of frames*) of one or more devices (*col. 10, lines 22-45*).

Regarding **claim 20**, in addition to features recited in base claim 19 (see *rationales discussed above*), Watanabe further discloses wherein the base device determines when there is a change in the fastest data rate device ( in the network, and in response thereto, changes the data packet length or the contention window size used by one or more devices operating on the network (*col. 9, lines 26-32 and thereafter, Watanabe discloses the selection of the contention windows for device 12 (fastest data rate device) is also depended from the traffic conditions*).

Regarding **claim 21**, in addition to features recited in base claim 12 (see *rationales discussed above*), Watanabe further discloses wherein the base device monitors average access time of devices on the network, and changes the data packet length or the contention window size used by one or more devices operating on the network in response to detecting a predetermined change in the average access time

Regarding **claim 22**, in addition to features recited in base claim 12 (see *rationales discussed above*), Watanabe further discloses wherein each device that access the network uses a network access control parameter appropriate for its data rate so that all devices occupy the network for a substantially equal period of time when transmitting a data packet (*col. 9, lines 26-32 and thereafter, Watanabe discloses the selection of the contention windows for device 12 (fastest data rate device) is also depended from the traffic conditions or collision condition*).

Regarding **claim 23**, in accordance with Watanabe reference entirety, Watanabe show a processor readable memory medium encoded with instructions (*not shown; inherent there is software or computer program in access point 14*) that, when executed by a processor (14), cause the processor to perform steps comprising:

- a. determining the data rate with which each of a plurality of wireless devices (12) access a wireless network (*col. 8, lines 9-12, Watanabe discloses access point 14 determines, through indication in the broadcast channel, whether a prior transmission of a packet of data has been successfully received*); and
- b. assigning a network access parameter (*time slots and/or value of feedback acknowledgement*) for one or more of the wireless devices (12) so as to control



throughput on the wireless network (*col. 8, lines 5-24 and thereafter, Watanabe discloses access point 14 dynamically allocates a number of time slots to device 12 for transmitting data on a network in a controlled manner*).

Regarding **claim 24**, in addition to features recited in base claim 23 (*see rationales discussed above*), Watanabe further discloses wherein the instructions for assigning a network access parameter comprise instructions for assigning a maximum data packet length (time slots) used by a device (12) when transmitting data on the wireless network (*col. 8, lines 9-25*).

Regarding **claim 28**, in addition to features recited in base claim 24 (*see rationales discussed above*), Watanabe further discloses wherein the instructions for assigning comprise instructions for assigning a contention window size (time slots) used by the device (12) when accessing the network (Fig. 1) (*col. 8, lines 9-25*).

Regarding **claim 30**, in addition to features recited in base claim 23 (*see rationales discussed above*), Watanabe further discloses instructions for detecting when a device goes on or comes off (sleep mode) the network, and in response thereto, modifying the network access parameters of one or more devices (*selection of the size of the contention window to be a multiple of frames*) of one or more devices (*col. 10, lines 22-45*).

Regarding **claim 31**, in addition to features recited in base claim 30 (*see rationales discussed above*), Watanabe further discloses instructions for determining when there is a change in the fastest data rate device (12) in the network (Fig. 1), and in response thereto, changing the data packet length or the contention window size used

by one or more devices operating on the network (*col. 9, lines 26-32 and thereafter, Watanabe discloses the selection of the contention windows for device 12 (fastest data rate device) is also depended from the traffic conditions*).

Regarding **claim 32**, in addition to features recited in base claim 23 (see *rationales discussed above*), Watanabe further discloses instructions for monitoring average access time of devices on the network, and changing the data packet length or the contention window size used by one or more devices operating on the network in response to detecting a predetermined change in the average access time (*col. 9, lines 26-32 and thereafter, Watanabe discloses the selection of the contention windows for device 12 (fastest data rate device) is also depended from the traffic conditions*).

Regarding **claim 33**, the claim is rejected by the same rationales applied to claim 23. Moreover, the additional limitations of “a radio transceiver” and “a processor” are deemed to be inherently included in the access point 14 and variously disclosed at col. 7, lines 23-33 and thereafter.

Regarding **claim 34**, in accordance with Watanabe reference entirety, Watanabe discusses an access point 14 includes a transceiver and a processor (not shown) at col. 7, lines 23-33 and the access point 14 broadcasts both values of the feedback acknowledgement and the allocated time slots at col. 8, lines 5-24 and thereafter, corresponding to the claimed limitations in a manner as recited.

Regarding **claim 35**, in addition to features discussed above, Watanabe also discloses wherein the processor processes a signal received from another communication device (22), which signal includes a network access control parameter

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message that is stored in a memory (*not shown; inherently there is a memory or buffer in the access point 14 for storing data as well as configuration information*), wherein the network access control parameter (*time slots*) is a parameter selected from the group consisting of: a maximum data packet size and a contention window size (*time slots as well as contention window and their correlation is discussed at col. 8, lines 5-24 and thereafter*).

### ***Allowable Subject Matter***

5. Claims 3-5, 7, 14-16, 18, 25-27, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, considered individually or in combination, fails to fairly or suggest the claimed method/system/processor readable memory medium, comprising the limitations of base claims 1, 11, and 23 and further limits with novel and unobvious limitations of the dependent claims 3-5, 7, 14-16, 18, 25-27, and 29 in a manner as recited.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Young et al (USP6,965,942).

Beach et al (USP 6,404,772),

IEEE P802.15, Wireless Personal Area Networks, IEEE, pages 1-7, December 2000.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**FRANK DUONG  
PRIMARY EXAMINER**

May 30, 2006